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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/600,984

06/20/2003

Kurt R. Carlson

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09/28/2011

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EXAMINER

ZEMEL, IRINA SOPJIA

ART UNIT

PAPER NUMBER

1765

MAIL DATE

DELIVERY MODE

09/28/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/600,984	Applicant(s) CARLSON ET AL.	
	Examiner Irina S. Zemel	Art Unit 1765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-3,6,14,15 and 21-27 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-3,6,15 and 24-27 is/are rejected.
- 8) ☒ Claim(s) 14, 21-23 is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3, 6, 15, 24-27 are rejected under 35 U.S.C. 103(a) as obvious over US Patent 5,562,985 to Sano et al., (hereinafter "Sano") ") as evident from "Poisson's Ratio of Foamed Plastics" by Dement'ev et al., (hereinafter "Dement'ev").

The rejection stands as per reasons of record.

The disclosure of Sano is discussed in the previous office action. In addition to the discussion in the previous office action, it is noted that even if, *arguendo*, the buffering and accommodating steps does not fully occur during the production of installation steps (which it inherently has to since at least some forces are applied to the communication line during the installation, such steps are fully expected to occur once the installed cable is operated and thermal expansion/contraction occurs.

Response to Arguments

Applicant's arguments filed 7-14-2011 have been fully considered but they are not persuasive. First it is noted that the applicants stated that claim 1-, 14, 15 and 21-27 are pending. Claims 4-5 are, however are cancelled.

The only arguments presented by the applicants is that the goal of Sano reference is to obtain a fiber with uniform diameter, and to achieve that the hollow spheres are expanded and set to a fixed size. In the instant invention, in contrast to the

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teachings of Sano, the microballons are designed not to expand but to compresses when buffering as sensor fiber during the operation. This is not convincing because the applicants compare two different things. Sano discusses the production of uniform diameter fibers for use in air-blown apparatus prior to the fibers being used in any actual operation (i.e., prior to use), while the applicants discuss what happens to the fiber and the surrounding material while the fibers are already installed and are actually operating. It is during the operation (as confirmed by the applicants), and not through the installation process that the fibers contract and expand. Since the surrounding material of Sano comprises substantial volume of expanded microballoons in it, which microballoons are hallow particles that have a very thin polymeric shell, the microballons are compressable and are expected to be compressed to at least some degree when the fiber expands, inherently providing buffering. This is similar to the buffering effect that is explained by the applicants in their specification and referred to in the response. Note that the buffering as disclosed in the instant specification only occurs upon operating, or thermal expansion/contraction of the fibers, not when the fibers are brought into contact with the polymeric material at the initial stage of making the device. In addition, the passages regarding the microballons being set in size only apply to the expanded microballons, while the reference expressly discloses that the microballons do not have to be expanded. In either case, the microballons, which are much more compressable than the polymeric material they are dispersed within, are expected to compress upon application of any force that comes from the fiber the polymeric material surrounds.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Irina S Zemel/
Primary Examiner, Art Unit 1765

Irina S Zemel
Primary Examiner
Art Unit 1765

ISZ